

NORTH CAROLINA  
**Turnpike Authority**

# NC Turnpike Authority

Presentation to the

## Joint Legislative Transportation Oversight Committee

David Joyner  
November 4, 2011

# *Agenda*

- **NC Turnpike Authority**
- **Tolling Process**
- **Projects**
- **Toll Operations**
- **National Interoperability**

# ***NC Turnpike Authority***

- **Established by General Assembly in 2002**
  - Staffing began in 2005
- **Governed by 9-member Board of Directors**
- **Authorized to build up to 9 projects**
- **Currently developing five projects**
  - Authorized for construction by General Assembly in 2006

# ***Statutory Limitations on Tolling***

- **Projects must have free alternate route**
- **No tolls on existing roads**
- **Tolls must be removed once debt is repaid**
- **Projects must be authorized by General Assembly prior to construction**

# ***Turnpike Authority: Business Model***

- **Small, highly focused, team-oriented organization**
  - Finance
  - Engineering
  - Operations
  - Marketing
- **Private-sector, results-based approach**
  - Use highly skilled, specialized consultants
  - Draw on other NCDOT resources for efficiency
  - Apply aggressive scheduling strategies

# ***Accomplishments***

## ■ **Triangle Expressway opening**

- Ahead of schedule and under budget
- Phase I opening December 8, 2011
- Phase II opening in December 2012
- First toll project in US designed and financed as all electronic tolling

## ■ **Monroe project ready to finance**

- Won year-long Federal NEPA lawsuit October 24, 2011
- Saved contractor's bid - \$98 million under engineer's estimate
- Will issue remaining bonds and award contract this month
- All permits are in hand

# ***Accomplishments (continued)***

- **Reach commercial close on Mid-Currituck Bridge next month**
  - NC's first major P3 transportation project
  - Issue limited "Notice to Proceed" for final design and right-of-way acquisition next spring
  
- **Garden Parkway milestones**
  - Final Environmental Impact Statement is complete
  - Record of Decision anticipated from FHWA any day
  - Expect to issue bonds in summer 2012
  - Begin construction next year

# ***The Business of Tolling***

- **Step 1: Locals request financial feasibility study**
- **Step 2: Turnpike Authority evaluates**
  - Traffic and Revenue analysis – revenue potential
  - Consulting Engineer's Report – cost
  - Financial analysis – viability

**If viable:**

- **Step 3: Project authorized by General Assembly**
- **Step 4: Conduct in-depth environmental studies**
- **Step 5: Complete financing, award construction contract**
- **Step 6: Market roadway, sell transponders, collect tolls, repay bonds**



# ***Toll Project Financing***

- Tolls rarely cover full project cost
  - *Almost always a “gap”*
- Proportionately small % gap funds can deliver large, expensive projects
  - Triangle Expressway - \$25 million annual gap supplemented \$1 billion financing
- Toll projects save decades of annual contributions from Transportation Improvement Program (TIP) and decades of maintenance costs

# *Origin of First Five Projects*

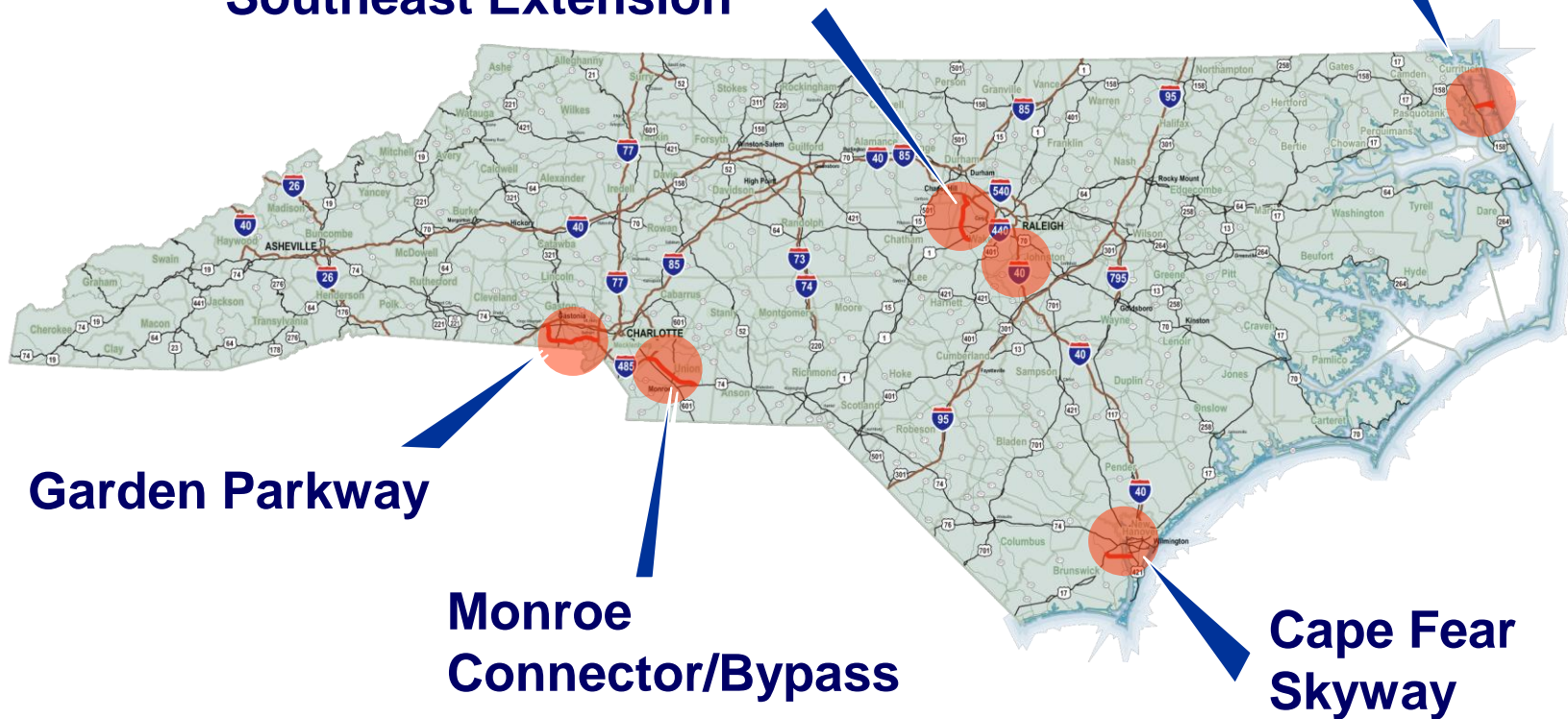
## **All projects have similar characteristics:**

- **Highest priorities among local planning organizations**
- **Large, expensive mega-projects (\$500M+)**
- **Difficult to fund with traditional resources**
- **Authorized by General Assembly (2006)**
- **No new projects have been added**

# Projects

**Triangle Expressway and  
Southeast Extension**

**Mid-Currituck Bridge**

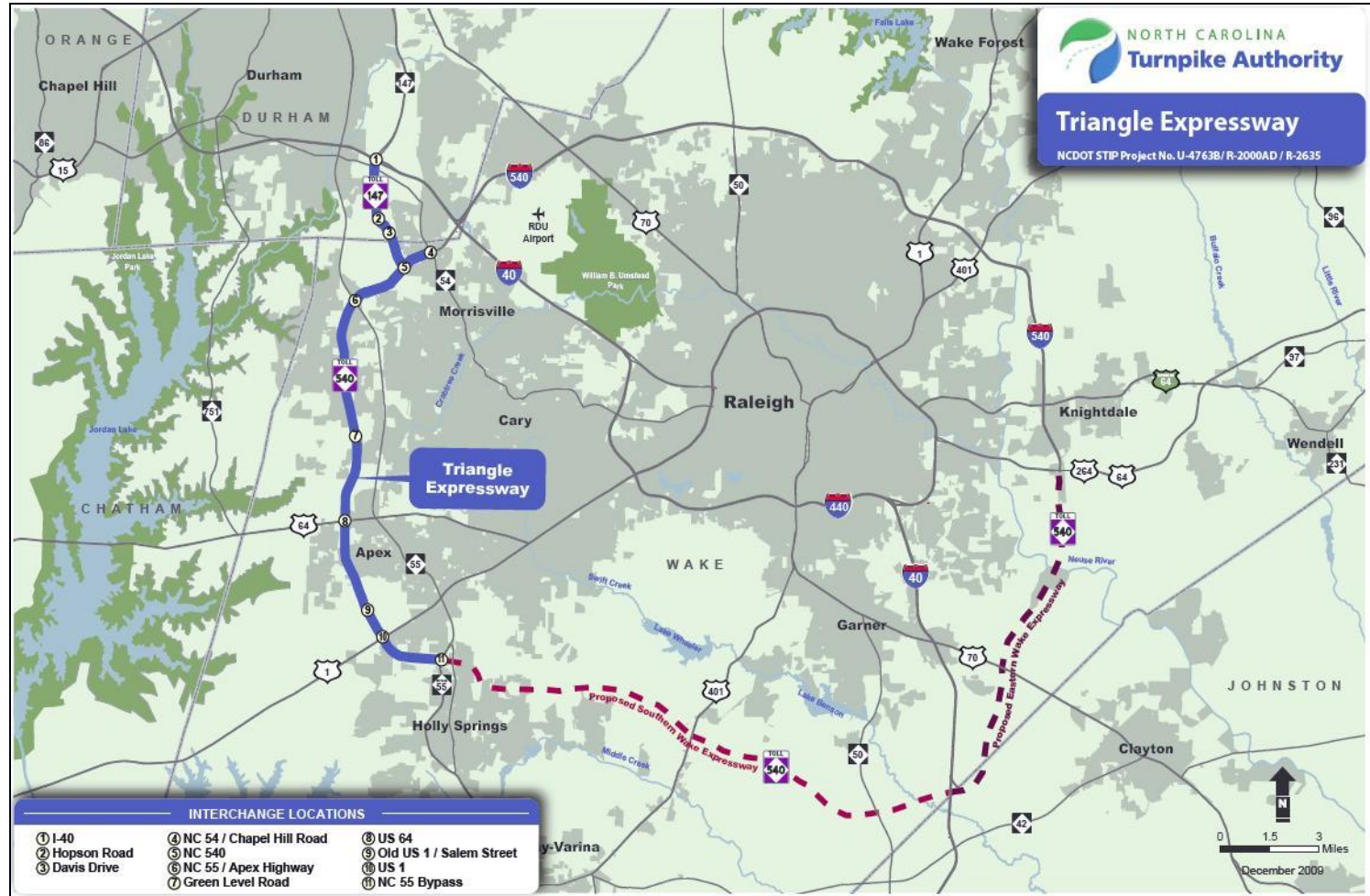


**Garden Parkway**

**Monroe  
Connector/Bypass**

**Cape Fear  
Skyway**

# Triangle Expressway



# ***Triangle Expressway Overview***

<b>Gap fund appropriation</b>	<b>\$25 million</b>
<b>Cost</b>	<b>\$1 billion</b>
<b>Length</b>	<b>19 miles</b>
<b>Construction began</b>	<b>August 2009</b>
<b>Phase I open</b>	<b>December 2011</b>
<b>Phase II open</b>	<b>December 2012</b>

# ***Triangle Expressway Construction Overview***

- **Phase I – Triangle Parkway**
  - 90% complete
  - Remaining: final paving, striping, guardrail, bridge completion, signs
  
- **Phase II – Western Wake Freeway**
  - 70% complete
  - 21 of 34 bridges complete
  - 35% of concrete pavement placed
  - May open portion in August 2012



# *Triangle Expressway*







# *Triangle Expressway: Aesthetic Design*

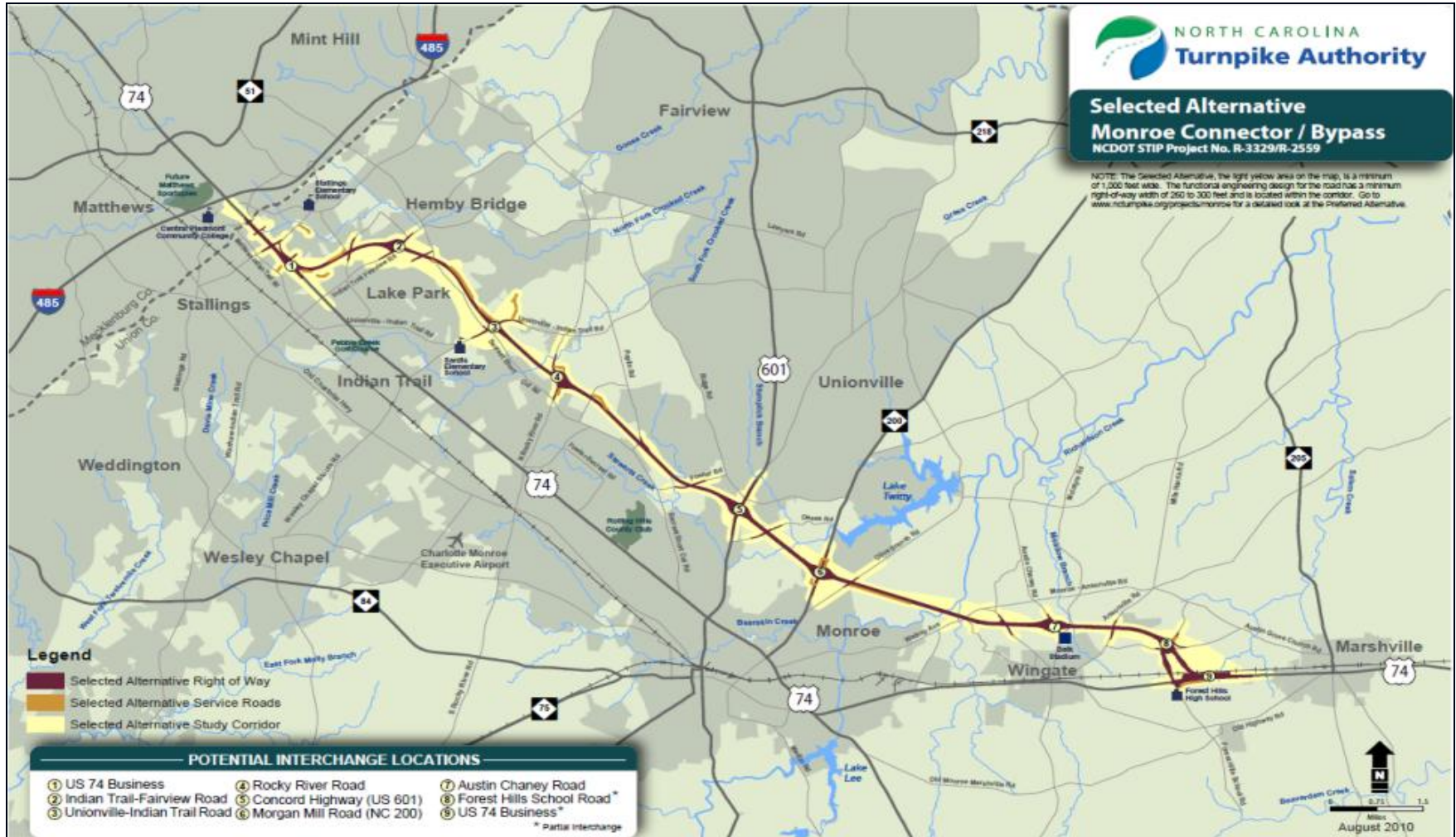


# *Triangle Expressway: Aesthetic Design*





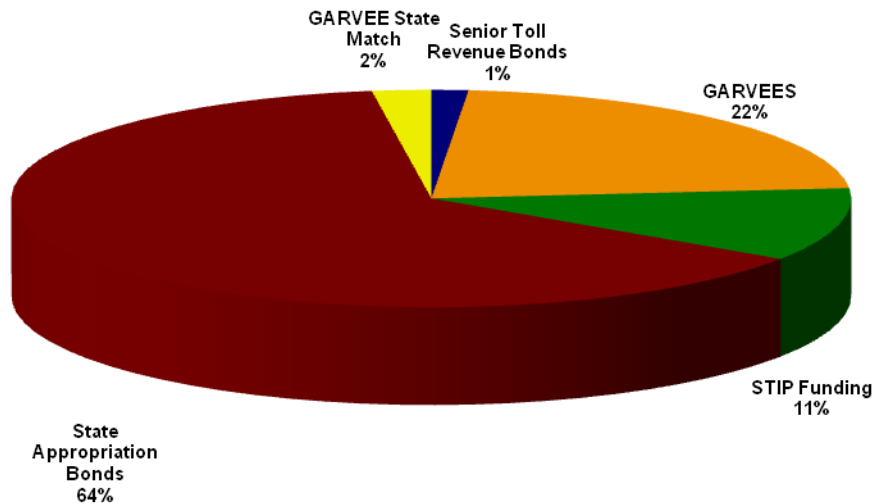
# Monroe Connector/Bypass



# ***Monroe Overview***

<b>Gap fund appropriation</b>	<b>\$24 million</b>
<b>Cost</b>	<b>\$725 million</b>
<b>Length</b>	<b>20 miles</b>
<b>Sell bonds</b>	<b>Nov. 17, 2011</b>
<b>Award design-build contract</b>	<b>November 2011</b>
<b>Construction begins</b>	<b>Summer 2012</b>
<b>Open to traffic</b>	<b>December 2015</b>

# Monroe Plan of Finance



Credit	Rating	Final Maturity
GARVEEs	AA	12 years
Appropriation	AA	30 years

**Aggregate TIC: 3.864%**

## Sources of Funds (in \$000s)

STIP	77,000
Appropriation Bonds	
2010 October	- 233,920
2011 November	- 213,600
	447,520
Senior Toll bonds	10,000
GARVEE	156,000
GARVEE STATE Match	16,048
OIP/OID	18,795
	<u>725,363</u>

## Uses of Funds (in \$000s)

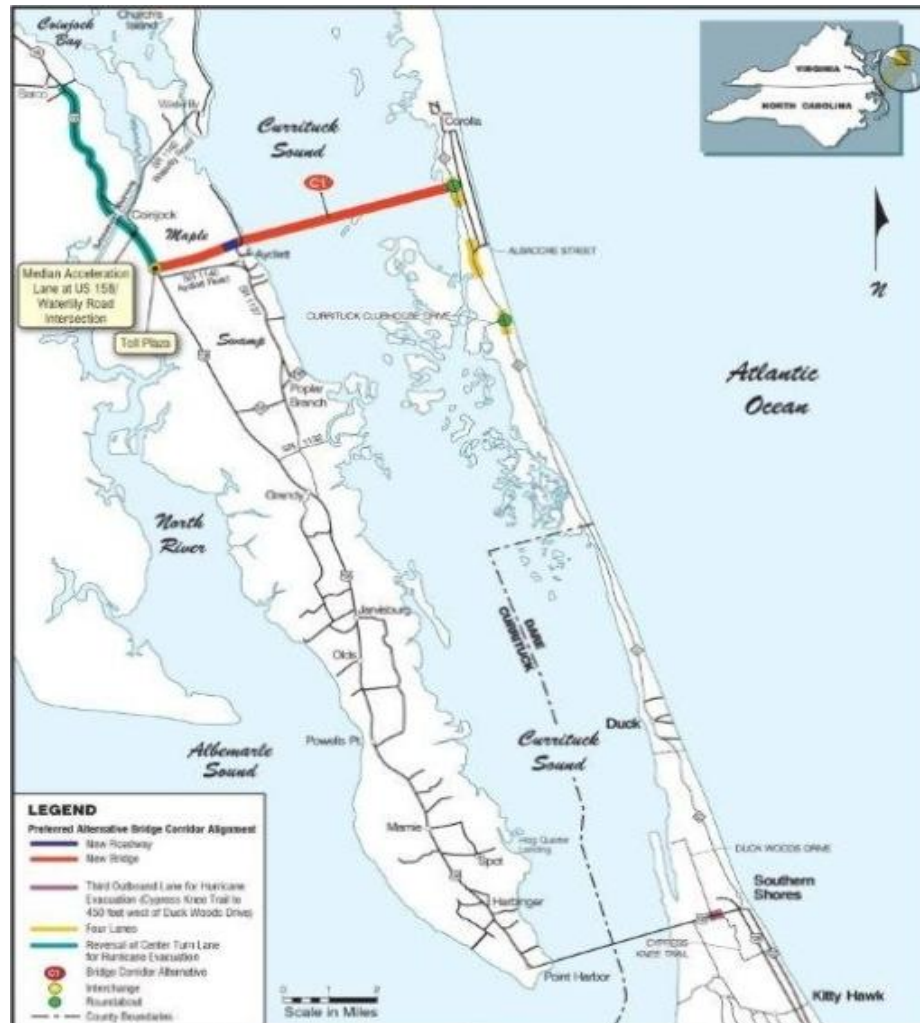
Construction	671,469
Capitalized Interest	44,791
Debt Service Reserve Fund	4,304
Underwriter's Discount	3,612
Other Costs	1,187
	<u>725,363</u>

# *Monroe Connector/Bypass Design*





# Mid-Currituck Bridge



# ***Mid-Currituck Bridge Overview***

<b>Gap fund appropriation</b>	<b>\$28 million</b>
<b>Cost</b>	<b>\$665 million</b>
<b>Length</b>	<b>7 miles</b>
<b>Commercial close</b>	<b>December 2011</b>
<b>Record of Decision</b>	<b>March 2012</b>
<b>Financial close</b>	<b>August 2012</b>
<b>Construction begins</b>	<b>Spring 2013</b>
<b>Open to traffic</b>	<b>December 2016</b>



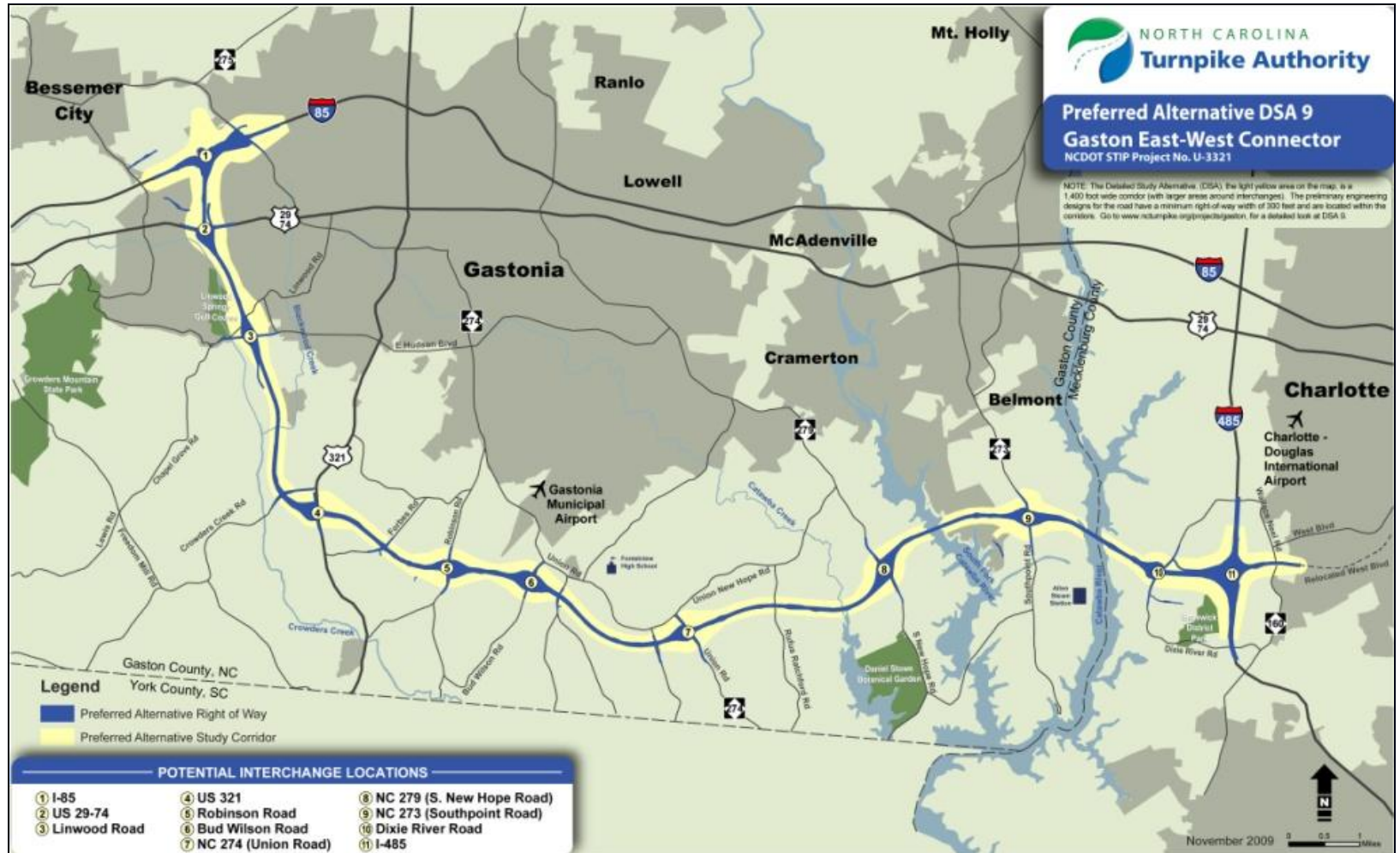
# *Mid-Currituck Bridge Rendering*



# ***Benefits of Public-Private Partnership***

- **Risk transfer:**
  - **Toll revenue shortfall**
  - **Construction overruns**
  - **Operations costs**
  - **Maintenance costs**
- **Private equity contribution – \$100 million +/-**
- **Value engineering**

# Garden Parkway

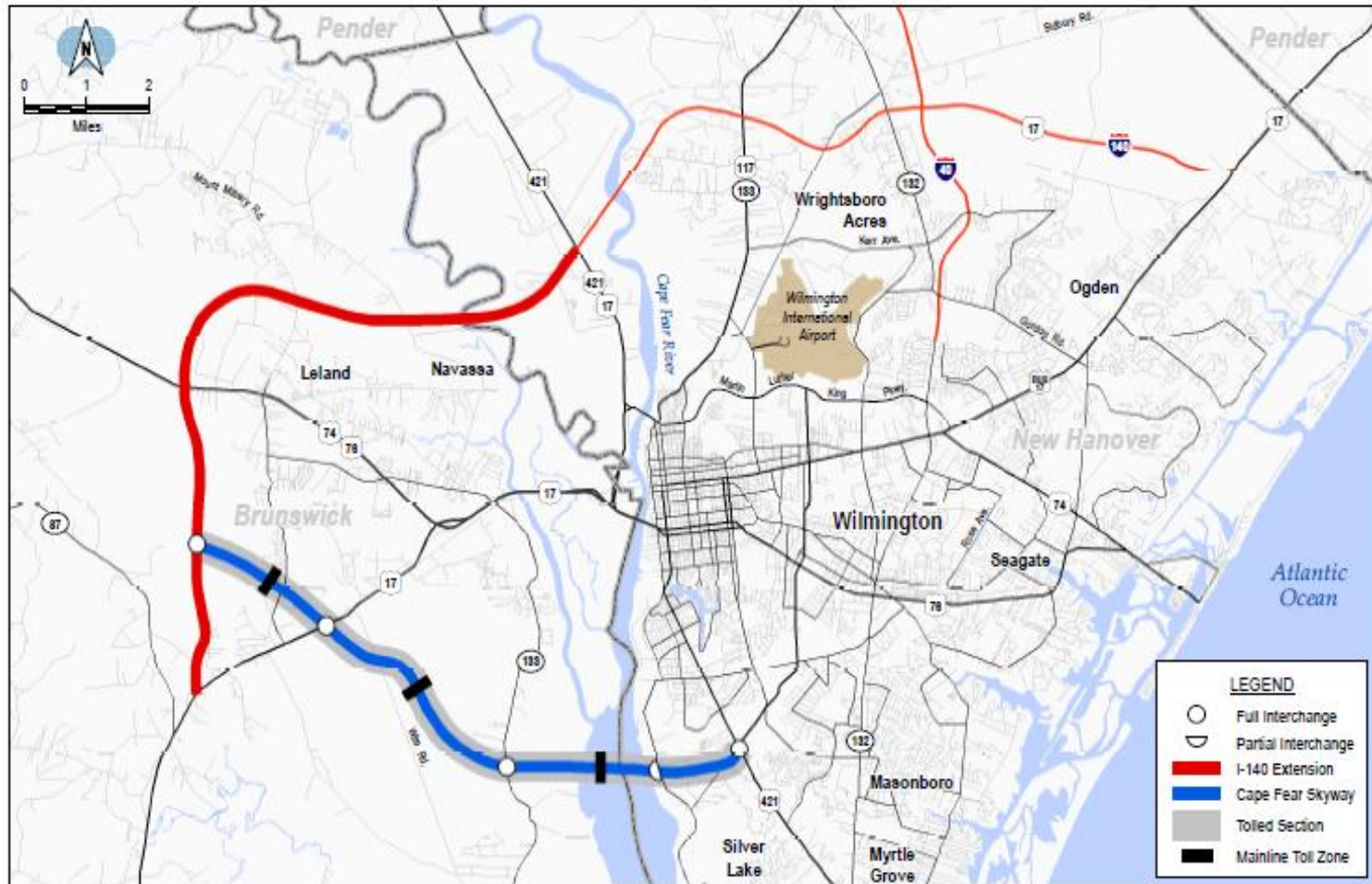


# ***Garden Parkway Overview***

<b>Gap fund appropriation</b>	<b>\$35 million</b>
<b>Cost</b>	<b>\$900 million</b>
<b>Length</b>	<b>22 miles</b>
<b>Record of Decision</b>	<b>November 2011</b>
<b>Open design-build bids</b>	<b>March 2012</b>
<b>Sell bonds</b>	<b>Summer 2012</b>
<b>Award contracts</b>	<b>Summer 2012</b>
<b>Open to traffic</b>	<b>December 2015</b>



# Cape Fear Skyway



# ***Cape Fear Skyway Overview***

<b>Gap fund appropriation</b>	<b>- 0 -</b>
<b>Cost</b>	<b>\$950M - \$1B</b>
<b>Length</b>	<b>9.5 miles</b>
<b>Draft EIS</b>	<b>2013</b>
<b>Final EIS</b>	<b>2014</b>
<b>Record of Decision</b>	<b>2015</b>

# *Most Advanced Toll Technology*

**Out with the old....**

***No Toll booths***



**In with the new...**



***All Electronic Tolling***





# 2012 Triangle Expressway Toll Rates



## To Hopson Road (Exit 2)

TOLL RATES		
		
2 AXLES	\$0.30	\$0.45
3 AXLES	\$0.60	\$0.90
4+ AXLES	\$1.20	\$1.80

## I-40 to NC 540 (Exit 5)

TOLL RATES		
		
2 AXLES	\$0.50	\$0.77
3 AXLES	\$1.00	\$1.54
4+ AXLES	\$2.00	\$3.08



# Transponder-based Tolling

- Purchase transponder
  - \$5 sticker tag
  - \$20 hard case – *soon interoperable*
- Set up account - \$20 minimum
- Account debited as used



# *Triangle Expressway Toll Gantries*



# *Toll Gantry Cameras and Readers*



# ***What Interoperability Means***

- **Different technology in different states**
  - NC Quick Pass
  - EZPass – Northeast (24 agencies in 14 states)
  - SunPass – Florida
  - TxTag – Texas
- **Problem: Most transponders aren't interoperable with other states**
- **No intra-agency violation enforcement**
- **Problem being rectified**
  - New technology
  - Intra-state agreements

# ***NC Leading National Interoperability Efforts***

- **NC Turnpike Authority formed Alliance for Toll Interoperability in 2008**
  - **Membership: 43 toll agencies**
  - **Members to share license plate and account information**
  
- **Goals:**
  - **Efficient exchange of license plate data**
  - **Multi-state agreements**
  - **Multi-state enforcement violation legislation**
  - **Result: More revenue, greater efficiency**







# *Customer Service Center*

- **Opened October 11, 2011**
- **Functions:**
  - **Set up accounts and sell transponders**
  - **Serve customers via phone, web, mail and walk-in**
  - **Reconcile accounts and collections**
- **Staffed by local firm - supervised by Turnpike Authority**
- **Expandable to support ferry system, future toll and transit projects**

# ***Why Tolling Is Critical to Transportation Planning***

- **Applied strategically, in limited situations, can leverage funds for large, expensive projects**
- **Can expedite major, high-traffic-volume projects of regional significance**
- **Can add financing options that save decades of gas tax funding and operating costs**

# *Keys to Future of Tolling*

- **Public approval**
  - **Support among local MPOs and communities**
  - **The motorist is our customer! Public support is critical**
  - **Transponder sales doubled estimates to date**
    - **1793 sold since October 11<sup>th</sup>**
- **Technological advances make tolling easy and seamless**



***Questions?***